

## Publications

### Ph.D. Thesis

*Time Resolved Photoacoustic Calorimetry: Its Theory and Application to the Study of Myoglobin and Hemoglobin*, University of Colorado, 1990.

### Peer reviewed literature

Schnell R. C., Bridgeman H. C., Naegele, P. S., Watson, T. B., "The National Oceanic and Atmospheric Administration WP-3D Meteorological, Aerosol, and Gas Systems, and Flight Operations, on WATOX-86, *Global Biogeochemical Cycles* (1987), **1**, 297.

Bridgeman, H. A., Sievering, H., Watson, T., "Large and Giant Aerosols in the Marine Boundary Layer during WATOX, Jan. 4-9, 1986", *Biogeochemical Cycles* (1988), **3**, 13.

Schnell R. C., Watson, T. B., Bodhaine, B. A., "NOAA WP3-D: Instrumentation and Flight Operations on AGASP-II", *J Atm. Chem* (1989), **9**, 3.

Peters, K. S., Watson, T., and Marr, K., "Time-Resolved Photoacoustic Calorimetry: A Study of Myoglobin and Rhodopsin", *Annu. Rev. Biophys. Chem.* (1991), **20**, 343.

Peters, K. S., Watson, T.B., Logan, T., "Photoacoustic Calorimetry Study of Human Carboxyhemoglobin", *J. Am. Chem. Soc.* (1992), **144**, 4276-4278.

Taldukar, R. K., Mellouki, A., Schmoltner, A., Watson, T. Montzka, S., Ravishankara, A. R., "Kinetics of the OH reaction with Methyl Chloroform and its Atmospheric Implications", *Science* (1992), **257**, 227.

Watson, T. B., "Evaluation of an Intensive Sampling and Analysis Method for Carbon Monoxide", *Journal of Air and Waste Management Assoc.* (1995), **45**, 29-35.

Luke, W. T., Watson, T. B., McMillen, R. T., Gunter, R. L., "A Comparison of Airborne Measurements Made from the NOAA Twin Otter with Ground Based Measurements during the 1995 Nashville Southern Oxidants Study", *Journal of Geophysical Research*.

Keislar, R. E., Watson, T. B., Reese, B., Start, G. E., "Dispersion of Tracers at the Nevada Environmental Research Park", in preparation for submission to *Atmospheric Environment*.

Keislard, R. E., Watson T. B., George D. H., Reese B. R., and Biltoft C. A., 1998: "Puff Dispersion observations during the Dipole Pride Tracer Experiment", In preparation for submission to *J. Amer. Meteor. Soc.*

Watson T. B., G. Crescenti, R. E Keislard, and C. A. Biltoft, 1998: "Measurement of Dispersion in the Along Wind Direction as measured during the Overland Atmospheric Dispersion (OLAD) Field Experiment", in preparation for submission to *J Geophys. Res.*

Alvarez, R. J. II, Sneff, C. J., Hardesty, R. M., Parrish, D. D., Luke, W. T., Watson, T. B., Daum, P. H., Gillani, N., "Comparisons of airborne lidar measurements of ozone with airborne in situ measurements during the 1995 Southern Oxidants Study", *J. Geophys. Res.*, (1999), **103**, 31,155.

## Reports

Carter, R. G., Watson, T., Hoover, D. J., Start, G. E., *Utah Valley 1991-1992 Study, Addendum Supplemental CO Measurements*, U. S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Research Laboratories, Air Resources Laboratory, Field Research Division, Idaho Falls, Idaho (1993).

Watson, T., Carter, R. G., Dickson, C. R., Start. G. E., Johnson, R. C., *Wasatch Front Carbon Monoxide Intensive Study*, final report prepared for the State of Utah Department of Environmental Quality, Division of Air Quality, U. S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Research Laboratories, Air Resources Laboratory, Field Research Division, Idaho Falls, Idaho (1993).

Watson, T. B., *The NARSTO Research plan and Its Application to the Air Resources Laboratory*, U. S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Research Laboratories, Air Resources Laboratory, Field Research Division, Idaho Falls, Idaho (1994).

Bowers, J. F., Start, G. E., Carter, R. G., Watson, T. B., Clawson, K. L., Crawford, T. L., "Experimental Design and Results for the Long-Range Over water Diffusion (LROD) Experiment", Meteorology Division, U. S. Army Dugway Proving Ground (1994).

Wellman, D. L., Willison, S. W., Luke, W. T., McMillen, R. T., Aubel, D. L., Gunter, R. L., Watson, T. B., *1995 Summary Reoprt Sothern Oxidants Study: Technical Support for Airborne Measurements of Eddy Fluxes with Chemical and Meteorological Variables* , NOAA Technical Memorandum ERL ARL-217,

National Oceanic and Atmospheric Administration, Environmental Research Laboratories, Air Resources Laboratory, Silver Spring, Maryland (1996).

Watson, T. B., Kieslar, R., Reese, B., Summary report of Chemical Measurements made during the 1996 Defense Special Weapons Agency, Dipole Pride Tracer Program. U. S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Research Laboratories, Air Resources Laboratory, Field Research Division, Idaho Falls, Idaho (1997).

Watson, T. B., Keislar R. E., Reese B., George D. H., *The Defense Special Weapons Agency DIPOLE PRIDE 26 Field Experiment*, NOAA Technical Memorandum, submitted for review 2/98.

Watson, T. B., Crescenti, G., Keislar R. E., , R., Reese B., George D. H., *The Overland Atmospheric Dispersion (OLAD) Field Experiment*, NOAA Technical Memorandum, in preparation.

### Papers Presented at Scholarly Meetings

Bowers, J. F., Carter, R. G., Watson, T. B., "Results of the Long Range Over Water Diffusion Experiment", 1994 Battlefield Atmospherics Conference, White Sands, New Mexico, 29 November-1 December, 1994.

Bowers, J. F., Start, G. E., Carter, R. G., Watson, T. B., Clawson, K. L., Crawford, T. L., "The Long-Range Over water Diffusion (LROD) Experiment", March American Meteorological Society Meeting, March, 1995.

Watson, T. B., Luke, W. T., McMillen, R., Gunter, R. L., Rodgers, M. O., Stoneking, C., Zika, R. G., Riemer, D. D., Farmer, C. T., Olszyna, K. Hartsell, B., Trends and Comparisons of Ozone and Ozone Precursors in Measurements Made Over the Youth Inc. Ground Station by the NOAA Twin Otter , *EOS Transactions* , American Geophysical Union, 1996 Fall Meeting, Vol. 77, NO. 46, Nov. 12, 1996, supplement, p F96.

Gunter, R. L., McMillen, R., Kleinman, L., Luke, W. T., Watson, T. B., Wellman, D. L., Wilkison, S. W., Evaluation of Flux Divergence of Ozone using Measured and Modeled Ozone Net Production Rates , *EOS Transactions* , American Geophysical Union, 1996 Fall Meeting, Vol. 77, NO. 46, Nov. 12, 1996, supplement, p F97.

McMillen, R., Gunter, R. L., Luke, W. T., Watson, T. B., Wellman, D. L., Wilkison, S.

W., Comparing Deposition Velocities Measured from Aircraft with Modeled Values, *EOS Transactions*, American Geophysical Union, 1996 Fall Meeting, Vol. 77, NO. 46, Nov. 12, 1996, supplement, p F82.

Watson, T. B., Luke, W. T., McMillen, R., Gunter, R. L., Rodgers, M. O., Stoneking, C., Zika, R. G., Riemer, D. D., Farmer, C. T., Olszyna, K. Hartsell, B., Measurements of Ozone and Ozone Precursors from the NOAA Twin Otter During the Southern Oxidants Study (SOS), *EOS Transactions*, American Geophysical Union, 1996 Fall Meeting, Vol. 77, NO. 46, Nov. 12, 1996, supplement, p F87.

Alvarez, R. J., Hardesty, R. M., Sneff, C. J., Parrish, D. D., Luke, W. T., Watson, T. B., Daum, P. H., Intercomparisons Between *In Situ* and Lidar Measurements During the 1995 Southern Oxidants Study, *EOS Transactions*, American Geophysical Union, 1996 Fall Meeting, Vol. 77, NO. 46, Nov. 12, 1996, supplement, p F96.

Clawson, K. L., T. B. Watson, D. H. George, and B. Reese, 1998: Integrated urban meteorological and carbon monoxide observations. Preprint, Tenth Joint Conference on the Applications of Air Pollution Meteorology with the AWMA, Phoenix, AZ, Jan. 11-16, Amer. Meteor. Soc., J61-J62.

Keislard, R. E., T. B. Watson, D. H. George, B. R. Reese, and C. A. Biltoft, 1998: Assimilation and visualization of sulfur-hexafluoride tracer concentrations with meteorological observations. Preprint, Tenth Joint Conference on the Applications of Air Pollution Meteorology with the AWMA, Phoenix, AZ, Jan. 11-16, Amer. Meteor. Soc., J63-J70.

Watson, T. B. "The Use of Intentionally Released Tracers to Quantify Atmospheric Transport and Dispersion", Paper presented at the Intermountain Conference on the Environment, March 17, 1988, Idaho Falls, ID.

Watson T. B., Keislard, R E., Crescenti, G. H., "The Use of a Sulfur Hexafluoride Line Source to Measure Along Wind Dispersion", Paper presented at the 216<sup>th</sup> National Meeting of the American Chemical Society, Boston, MA, August, 1998.

Crescenti, G. H., Watson T. B., Keislard, R E., "Determination of Along-Wind Diffusion From a Quasi-instantaneous Line source", Accepted for presentation of the January 1999 American Meteorological Society annual meeting, Dallas.

## Instruction Manuals

Watson, T., Carter, R. G., *Operators Manual for the Automated Gas Analysis System*, U. S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Research Laboratories, Air Resources Laboratory, Field Research Division, Idaho Falls, Idaho (1992).

## **Invited Lectures**

September 1993: Enviromex '93 Conference; Monterey, Mexico.

September 1996 Environmental Engineering Seminar, Idaho State University, Pocatello, Idaho.

## **Membership on Policy Committees**

Member of the Quality Assurance Advisory Committee of the NAFTA Commission for Environmental Cooperation.

## **Professional Society Membership**

American Chemical Society

American Geophysical Union

## **Consultant positions**

Analytical expert for International Atomic Energy Agency  
Special Tracer Training Course, Idaho Falls, Idaho, 8/92  
El Dabba, Egypt Field Program, 6/93

## **Security Clearance**

Department of Energy "L" clearance.